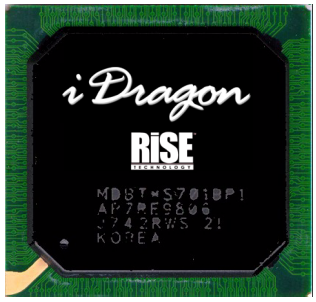
x86 IA Processor

PRODUCT BRIEF

iDragon™ mP6 IA Processor Overview

The Rise™ *iDragon™* mP6 IA processor is the first sixth generation x86-compatible processor optimized for low power consumption, high-performance information appliance applications such as set-top box, internet box, thin client, home gateway, iPVR and others. The innovative *iDragon™* mP6 IA processor is a superscalar and superpipelined IA procesor featuring 3 integer units, 3–way MMX technology and a fully pipelined floating point unit giving the users the utmost JAVA*, multimedia, video streaming and browsing experiences. The innovative circuitry of the *iDragon™* mP6 IA processor is optimized for low power consumption with the highest execution parallelism, which provides the excellent system thermal efficiency for enhanced system reliability.



BGA387

- **x86 Instruction Set Enhanced with MMX™ Technology**
- **Superscalar and Superpipelined Integer and MMX Architecture**
  - Excellent JAVA*, Multimedia, and Browsing Performance
  - Efficient MPEG4 Video Streaming
- **Advanced On-chip and System Power Management for Excellent Thermal Efficiency and Reliability**
  - Facility Gating
  - Required Selection Only
  - Necessity Switching Only
  - SMM Compatible
  - Clock Control
  - ACPI Compliant
- **Advanced Architectural Features**
  - Advanced Data Dependency Removal Techniques
  - Innovative Instruction Decode and Branch Prediction
  - Dynamic Allocation of Resources
- **Separate Code and Data Caches**
  - 8KB Code and 8KB Data
  - Filtered Tag Prefetching
  - Split Line Access Mechanism
- **High Performance FPU**
  - IEEE 854 Compliant
  - 80 Bit or 64 Bit Precision Results
- **IEEE 1149.1 Boundary Scan**
- **ISO 9001 Wafer Fabrication, Assembly and Test**
- **Support for Bus Frequencies of 60, 66, 75, 83, 95, and 100 MHz**
- **CPU/Host Bus Ratio 2X, 2.5X, 3X, 3.5X**
- **Low Profile 387-Terminal BGA Package**
- **0.18um CMOS Technology with 3.3V I/O and 2.0V Core**

Figure ***iDragon™*** mP6 IA Processor Block Diagram